

Name(s) of Risk Team Members: F. Cullen, L. Masi, J. Moore, R. Savage				Point Value → Parameter ↓		1		2		3		4		5			
Job Title: Helium Gas Compressor - Upgrade Oil Level Control Job Number or Job Identifier: JRA-09-06				Frequency (B)		≤once/year		≤once/month		≤once/week		≤once/shift		>once/shift			
Job Description: Replacing He Gas Compressor oil level probe				Severity (C)		First Aid Only		Medical Treatment		Lost Time		Partial Disability		Death or Permanent Disability			
Training and Procedures List (optional): Electrical/Mechanical Safe Work Practices				Likelihood (D)		Extremely Unlikely		Unlikely		Possible		Probable		Multiple			
Approved by: <i>E. Lessard</i> Date: 5/5/2006 Rev. #: 0																	
Stressors (if applicable, please list all): High noise area and heat stress during summer months.				Reason for Revision (if applicable): Annual review													
				Before Additional Controls										After Additional Controls			
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction	
Isolate electrical power to He Gas Compressor	Electric Shock	Stand to side of switch while operating, NFPA 70E PPE, training, LOTO, approved procedures	Y	2	1	2	3	12									
Isolate high pressure gas and bleed down compressor to atmosphere pressure	Air Blast	PPE, training, approved procedures	Y	2	1	1	3	6									
Reduce oil level (may be hot) to accommodate new instrument probe	Burns (oil may be hot if compressor has not cooled down)	PPE, training, approved procedures	Y	2	1	1	3	6									
Remove old probe from He Gas Compressor well and insert new instrument probe	Burns (oil may be hot if compressor has not cooled down)	PPE, training, approved procedures	Y	1	1	1	3	3									
Install new instrument probe wiring	Electric Shock	Listed electrical equipment, NFPA 70E PPE, approved procedures, training, LOTO, no exposed equipment	Y	1	1	1	3	3									
Install omega meter in control panel using greenlee punch and drill motor	Electric Shock	NFPA 70E PPE, training, LOTO, approved procedures, no exposed equipment	Y	1	1	1	3	3									

System installation testing and verification process	Arc blast from motor if shorted, loose parts act as missiles	Keep as far from motor as possible when starting, NFPA 70E PPE, procedures, training, Work Permit	Y	2	1	2	3	12								
He Gas Compressor pump and purge	Overpressure or flying missiles - Potential System Contamination	Training, PPE, proper valve lineup checked before pump start, Work Permit, approved procedures	Y	2	1	1	3	6								
Startup post-testing (vary oil levels and verify alarm levels)	Overpressure or flying missiles	Training, PPE, proper valve lineup checked before pump start, Work Permit, approved procedures	Y	2	1	1	3	6								
*Risk:	0 to 20		21 to 40			41-60				61 to 80				81 or greater		
	Negligible		Acceptable			Moderate				Substantial				Intolerable		